



# Executive Summary of the Technical Approval Authority Report

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August 2012

## Background and Need

Technical Approval Authority (TAA) is a technical credentialing system used by the Natural Resources Conservation Service (NRCS), Soil and Water Conservation Districts (SWCDs) and the Board of Water and Soil Resources (BWSR) to enable more staff to independently provide technical assistance for conservation practices.

Anecdotal evidence suggests that over the last decade or so, SWCD and NRCS field office skills for programs and administration have increased while technical/engineering skills have decreased. Clean Water Fund grant programs require grantees to demonstrate technical qualifications, of which TAA can be a key measure for SWCD staff. MN NRCS leadership has committed to increasing the technical skills of NRCS field office staff, and in early 2011 began training pursuits designed to increase technical skills. BWSR helped coordinate SWCD staff participation in those efforts. While BWSR had received requests from some SWCD staff interested in increasing their TAA, up until now no one had benchmarked the current TAA levels or the commitment to increasing TAA for specific priority conservation practices. No one maintains a statewide list of SWCD staff TAA. As a result, BWSR did not have a solid understanding of overall SWCD TAA levels and use or interest among the districts for increasing TAA.

## Purpose

The purpose of this project was to inventory the TAA levels of all SWCD staff in Minnesota and to determine the interest and commitment of SWCD offices to increasing TAA for priority conservation practices.

Beneficial results of the TAA inventory and survey include:

- benchmarking current TAA levels,
- demonstrating the capacity and expertise of SWCD staff,
- identifying TAA use and gaps,
- supporting BWSR staff (especially Board Conservationists and Clean Water Specialists) in easily identifying technical qualifications associated with implementation of certain grant funds (such as Cost-Share and Clean Water Funds),
- helping to coordinate and prioritize future training to increase TAA, and
- serving as a tool to measure and report change over time.

BWSR staff implemented a survey and inventory in the beginning of 2012 to record TAA levels as of the end of calendar year 2011. This document is a summary of the full report.

## Inventory Findings

Of the 90 Soil and Water Conservation Districts in Minnesota, 82 SWCDs completed the 2011 TAA inventory by March 12, 2012.

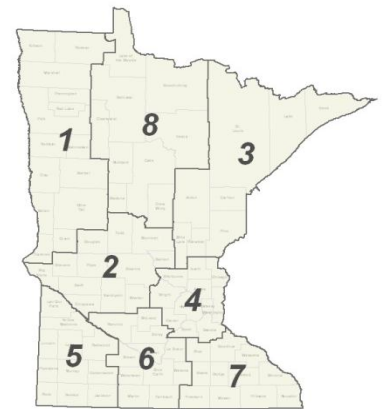
### *TAA Inventory Numbers*

Reported Data	#
Reporting SWCDs	82
SWCDs with Engineering TAA	51
SWCDs with Eco Science TAA	64
Staff with at least 1 Engineering TAA	89
Staff with at least 1 Eco Science TAA	131

### *Most Common Conservation Practice TAA, by MASWCD / Technical Services Area*

MASWCD Area	Engineering	Ecological Science
1	Grassed Waterway (412)	Tree Planting (612)
2	Grassed Waterway (412) Wetland Restoration (657)	Conservation Cover (327) Critical Area Planting (342) Filter Strip (393) Tree Planting (612)
3	Well Decommissioning (351)	Riparian Forest Buffer (391) Tree Planting (612) Upland Wildlife Habitat Mgt. (645) Windbreak / Shelterbelt Estab. (380)
4	Underground Outlet (620) Water & Sediment Control Basin (638) Wetland Restoration (657)	Critical Area Planting (342)
5	Grassed Waterway (412)	Conservation Cover (327) Upland Wildlife Habitat Mgt. (645) Windbreak / Shelterbelt Estab. (380)
6	Diversion (362) Grassed Waterway (412) Underground Outlet (620) Water & Sediment Control Basin (638)	Critical Area Planting (342) Tree Planting (612) Windbreak / Shelterbelt Estab. (380)
7	Diversion (362) Grassed Waterway (412) Underground Outlet (620) Water & Sediment Control Basin (638)	Critical Area Planting (342)
8	No Engineering TAA Reported	Critical Area Planting (342) Upland Wildlife Habitat Mgt. (645)

### *MASWCD Area Boundaries*



### **Total Practice Types Reported**

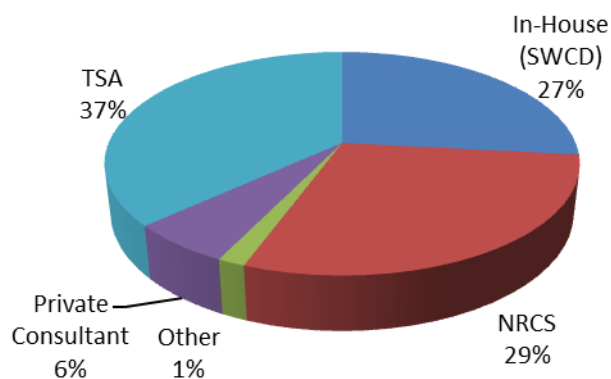
- Engineering: 49
- Ecological Science: 111

## Survey Findings

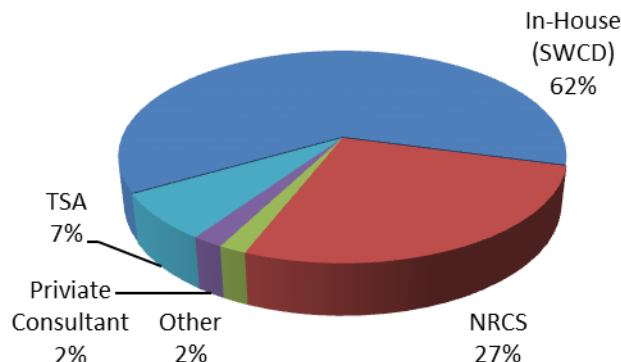
In addition to the inventory of TAA, BWSR wanted to understand SWCD interests and priorities for obtaining TAA. Ninety-six percent (96%) of the 82 reporting SWCDs completed the survey.

### *SWCD Self-Reported Technical Assistance Source Estimates for all 2011 Conservation Practices*

#### Engineering Practices



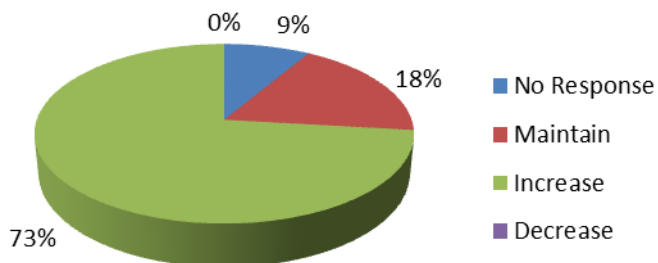
#### Ecological Science Practices



As the figures above illustrate, the SWCDs' self-reported estimates show it is more common for SWCDs to provide their own technical assistance for ecological science practices than for engineering practices. NRCS seems to be consistently providing just over a quarter of all technical assistance, regardless of practice category. These averages also highlight that SWCDs rely much more on Technical Service Area (TSA) engineers and technicians for engineering (rather than for ecological science practice) technical assistance at this time, which should be expected. Additional information about SWCD self-reported estimates can be found in Section 5 of the full report.

SWCD also have goals to increase their TAA levels. The survey showed that 73% of the participating SWCDs indicated a desire to increase TAA.

#### *SWCD TAA Goals*



The SWCDs were also asked to identify any priority practices for increasing staff TAA. Practices most often identified as a priority for increasing staff TAA are shown in the table below.

### *Reported priority practices*

Practice	# of SWCDs Reporting as a Top Priority to Increase TAA	# of SWCDs with TAA	# of Staff with TAA
Water & Sediment Control Basin (638)	23	50	88
Wetland Restoration (657)	19	49	91
Grade Stabilization Structure (410)	18	24	38
Streambank Protection (580)	17	25	50
Shoreline Protection (580)	15	12	16
Grassed Waterway (412)	14	54	102
Bioretention Basin (712) *	10	3	7
Terrace (600)	8	45	67
Critical Area Planting (342)	7	59	112
Filter Strip (393)	7	55	100

\*The Bioretention Basin (712) was an interim practice that has been absorbed into other practices.

## Conclusions

The survey and inventory provided useful information regarding the amount of TAA SWCDs currently have, as well as SWCD commitment and priorities for increasing TAA. The majority (73%) of the SWCDs participating in the survey indicated a desire to increase TAA. Water and Sediment Control Basins, Wetland Restorations and Grade Stabilization Structures were the practices most often identified by the SWCDs as priority training needs for increasing TAA.

The results were less clear in providing information about any actual shortfalls in SWCD TAA or resulting impact to the conservation delivery system. However, it is expected that SWCD priorities for TAA reflect local practice priorities and technical assistance needs.

Overall, it appears that TAA status varies significantly between SWCD offices. While the inventory did not explore reasons for these variations they can likely be attributed to regional differences in demand for certain types of conservation practices and TAA, shifting program/staffing focus in field offices, and limited capacity to focus on TAA training in some SWCD offices.

The inventory and survey process pointed to an apparent lack of understanding among some SWCDs regarding the complexities of the TAA system, especially in regard to the purpose and use of ecological sciences practice “planning” TAA levels for engineering practices and their location in the ecological sciences chart. The process also highlighted confusion around the longevity of TAA “certification” for particular practices, the process for periodic review or check-in, or how/if recertification was necessary after a certain period of not using a specific TAA.

Additionally, there appeared to be some confusion regarding how TAA is conferred for specific engineering practices with limiting factors. Some SWCDs reported having received different TAA for different phases of specific practices, while others reported a “lumped” TAA for all phases of practices. These all highlight opportunities for building this knowledge base so that SWCDs can be better informed and better prepared to implement their TAA levels.

## **Recommendations**

Based on the complete results of the survey and inventory, BWSR has the following recommendations.

### **Future Survey/Inventory Recommendations**

- Use this inventory and survey as part of the annual SWCD reporting in eLINK4Web. Maintaining a tracking system for SWCD TAA will help BWSR better understand SWCD capabilities and training priorities and to benchmark changes of SWCD staff capability across Minnesota.
- Design future surveys to gather information about any needs that are not being met by the TAA processes and why. A connection needs to be made between any technical assistance shortages SWCDs might be facing and the TAA process, both for specific practices and engineering versus ecological science practices.
- Design future surveys to retrieve information about current TAA activity and how frequently specific TAA skills are used.
- Investigate the regional differences in technical assistance levels to help prioritize needs (for both TAA and associated training and experience).
- Ask SWCD staff to further articulate specific classroom versus on-the-job experiential learning needs.
- Consult with NRCS to clarify how TAA is conferred for specific engineering practices with limiting factors and adjust future inventories as needed.

### **Training Recommendations**

- Develop and provide a general “TAA 101” training explaining the process for both ecological science and engineering practices, as well as job classes, practice implementation phases and the value of TAA, with input from the NRCS.
- Determine results to date of SWCD participation in the 2011 Grassed Waterways and Water Sediment and Control Basins Trainings (WASCOBS). Statewide, 20 SWCD staff participated in the classroom training portion for Grassed Waterways and 16 SWCD staff participated in the WASCOBS classroom training. One way to measure success and better understand capacity is to see if SWCD TAA levels for these practices have increased.
- Investigate enhanced mentoring opportunities across SWCD borders and between SWCDs and TSAs for experience that leads to TAA.

- Partner with the NRCS to determine specific trainings for some of the identified priority practices that also meet NRCS priorities; identify opportunities for collaboration on shared trainings, and implement training and evaluation to increase SWCD TAA levels in 2013 and beyond.
- Identify synergies to increase on-the-job experiential learning that occurs post-classroom training.

### **TAA Program Recommendations**

- Consult with NRCS regarding consistency of TAA assignment statewide in relation to limiting factors and how demonstrated competence is defined.
- Consult with NRCS to clarify how the process for staying current with TAA works for SWCD staff.
- Explore with the NRCS opportunities for Construction Inspection TAA for multiple practices where the skill set is the same or very similar.
- Work with the NRCS to identify how BWSR engineers can recommend engineering TAA for BWSR technicians and SWCD TSA engineers can recommend engineering TAA for SWCD technicians.
- Disseminate this report and applicable information to SWCDs, MASWCD, BWSR and NRCS staff and to highlight immediate opportunities for collaboration and shared services. Track any outcomes of this work.